

## Test Report (SVHC)

No.: SHAEC23010616001

Date: Jul 25, 2023

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Client Name: LEADEMC ELECTRONICS CO.,LTD.

Client Address: 207-209, BUILDING A, XINQIAO BUSINESS CENTER, 2163 WANYUAN ROAD, MINHANG DISTRICT, SHANGHAI

Sample Name: PPTC

Model No.: 2920PS

Client Ref. Information: 0402PS 0402HPS 0603PS 0603HPS 0805PS 0805HPS 1206PS  
1206HPS 1210PS 1210HPS 1812PS 1812HPS 2018PS 2018HPS  
2920PS 2920HPS 2920TS TSFT250

The above sample(s) and information were provided by the client.

SGS Job No.: SHP23-008088

Sample Receiving Date: Jul 19, 2023

Testing Period: Jul 19, 2023 ~ Jul 25, 2023

Test Requested: As requested by client, SVHC screening is performed according to:  
(i) Two hundred and thirty-five (235) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jun 14, 2023 regarding Regulation (EC) No 1907/2006 concerning the REACH.  
(ii) One (1) potential Substances of Very High Concern (SVHC) in the notification of WTO on Jun 1, 2021.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

**Summary:**

According to the ruling of the Court of Justice of the European Union on the definition of an article under REACH, and the specified scope and evaluation screening, the test results of SVHC are <del>negative</del> <sup>positive</sup> for all the <del>substances</del> <sup>substances</sup> in the submitted sample.	Pass
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Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.Jenny Lan  
Approved Signatory

scan to see the report



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**Remark :**

1. The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:  
<http://echa.europa.eu/web/guest/candidate-list-table>  
These lists are under evaluation by ECHA and may subject to change in the future.
2. REACH obligation:

**2.1 Concerning article(s):****Communication:**

Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance in the Candidate List.

**Notification:**

In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).

SGS adopts a position statement on SVHC in articles, unless indicated otherwise. Detail explanation is available at the following link:  
<http://www.sgs.com/-/media/global/documents/technical-documents/technical-bulletins/sgs-crs-position-statement-on-svhc-in-articles-a4-en-16-06.pdf?la=en>

**2.2 Concerning material(s):**

Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

**2.3 Concerning substance and preparation:**

If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

- a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
- a mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or
- a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:

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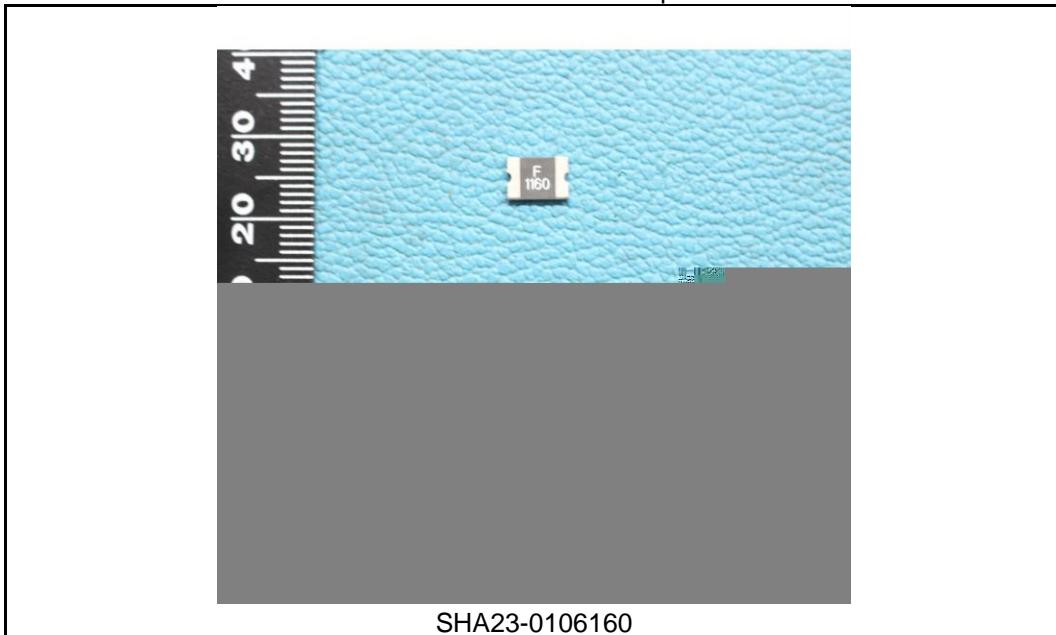
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- (a) a substance posing human health or environmental hazards in an individual concentration of  $1 \text{ mg/m}^3$  or mixtures that are solid or liquids (i.e., non-gaseous mixtures); or  
mixtures that are solid or liquids (i.e., non-gaseous mixtures); or  
(c) a substance on the SVHC candidate list (for reasons other than those listed above), in an  $1 \text{ mg/m}^3$ -gaseous mixtures; or  
(d) a substance for which there are Europe-wide workplace exposure limits

3. If a SVHC is found over the reporting limit, client is suggested to identify the composite component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

### Test Sample:

Photo of Submitted Sample



SHA23-0106160

SGS authenticate the photo on original report only

### Sample Description:

Test Part ID	Material Description	Test Part ID	Material Description
A1	Black resistor	-	-

### Testing Group:

Test Result ID	Description	Test Part ID	SGS Sample ID
001	Black resistor	A1	SHA23-0106160-0001.C001

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### Test Method:

With reference to SGS In-House method, analysis was performed by ICP-OES, UV-VIS, GC-MS, HPLC-DAD/MS and Colorimetric Method.

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**Test Results: (Substances in the Candidate List of SVHC)**

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
-	All tested SVHC in Candidate list	-	ND	-

**Test Results: (Potential SVHC)**

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
/	All tested Potential SVHC	-	ND	-

**Notes:**

- (1) The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.

ND = Not detected (lower than RL), ND is denoted on the SVHC substance.

- (3) \* The test result is based on the calculation of selected element(s) and to the worst-case scenario.

\*\* The test result is based on the calculation of selected marker(s) and to the worst-case scenario.

Calculated concentration of boric compounds are based on water extractive boron detected by ICP-OES. Calculated concentration of Barium diboron tetraoxide is based on water extractive boron and barium detected by ICP-OES.

RL = 0.01% is evaluated for element (i.e. cobalt, arsenic, lead, chromium (VI), aluminum, zirconium, boron, strontium, zinc, antimony, titanium, barium and cadmium respectively), except molybdenum

RL=0.001%, boron RL=0.005% (only for Lead bis(tetrafluoroborate))

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## Appendix

### Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
I	1	1,4-Diaminodiphenylmethane(MDA)	101-77-9	0.100
I	2	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.100
I	3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.100
I	4	Anthracene	120-12-7	0.100
I	5	Benzyl butyl phthalate (BBP)	85-68-7	0.100
I	6	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	0.100
I	7	Bis(tributyltin)oxide (TBTO)	56-35-9	0.100
I	8	Cobalt dichloride*	7646-79-9	0.010
I	9	Diarsenic pentaoxide*	1303-28-2	0.010
I	10	Diarsenic trioxide*	1327-53-3	0.010
I	11	Dibutyl phthalate (DBP)	84-74-2	0.100
I	12	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified $\zeta$ -HBCDD, -P $\ddot{\text{O}}$ O $\ddot{\text{O}}$ A-HBCDD)	-	0.100
I	13	Lead hydrogen arsenate*	7784-40-9	0.010
I	14	Sodium dichromate*	10588-01-9 /7789-12-0	0.010
I	15	Triethyl arsenate*	15606-95-8	0.010
II	16	2,4-Dinitrotoluene	121-14-2	0.100
II	17	Acrylamide	79-06-1	0.100
II	18	Anthracene oil**	90640-80-5	0.100
II	19	Anthracene oil, anthracene paste**	90640-81-6	0.100
II	20	Anthracene oil, anthracene paste, anthracene fraction**	91995-15-2	0.100
II	21	Anthracene oil, anthracene paste, distn. Lights**	91995-17-4	0.100
II	22	Anthracene oil, anthracene-low**	90640-82-7	0.100
II	23	Diisobutyl phthalate	84-69-5	0.100
II	24	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	0.010
II	25	Lead chromate*	7758-97-6	0.010
II	26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	0.010
II	27	Pitch, coal tar, high temp. **	65996-93-2	0.100
II	28	Tris(2-chloroethyl)phosphate		

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Batch	No.	Substance Name	CAS No.	RL (%)
III	36	Trichloroethylene	79-01-6	0.100
IV	37	2-Ethoxyethanol	110-80-5	0.100
IV	38	2-Methoxyethanol	109-86-4	0.100
IV	39	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	-	0.010
IV	40	Chromium trioxide*	1333-82-0	0.010
IV	41	Cobalt(II) carbonate*	513-79-1	0.010
IV	42	Cobalt(II) diacetate*	71-48-7	0.010
IV	43	Cobalt(II) dinitrate*	10141-05-6	0.010
IV	44	Cobalt(II) sulphate*	10124-43-3	0.010
V	45	1,2,3-trichloropropane	96-18-4	0.100
V	46	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	0.100
V	47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	0.100
V	48	1-methyl-2-pyrrolidone	872-50-4	0.100
V	49	2-ethoxyethyl acetate	111-15-9	0.100
V	50	Hydrazine	302-01-2	0.100
V	51	strontium chromate*	7789-06-2	0.010
VI	52	1,2-Dichloroethane	107-06-2	0.100
VI	53	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.100
VI	54	2-Methoxyaniline; o-Anisidine	90-04-0	0.100
VI	55	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.100
VI	56	Aluminosilicate Refractory Ceramic Fibres*	-	0.010
VI	57	Arsenic acid*	7778-39-4	0.010
VI	58	Bis(2-methoxyethyl) ether	111-96-6	0.100
VI	59	Bis(2-methoxyethyl) phthalate	117-82-8	0.100
VI	60	Calcium arsenate*	7778-44-1	0.010
VI	61	Dichromium tris(chromate)*	24613-89-6	0.010
VI	62	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.100
VI	63	Lead diazide, Lead azide*	13424-46-9	0.010
VI	64	Lead dipicrate*	6477-64-1	0.010
VI	65	Lead styphnate*	15245-44-0	0.010
VI	66	N,N-dimethylacetamide	127-19-5	0.100
VI	67	Pentazinc chromate octahydroxide*	49663-84-5	0.010
VI	68	Phenolphthalein	77-09-8	0.100
VI	69	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	0.010
VI	70	Trilead diarsenate*	3687-31-8	0.010
VI	71	Zirconia Aluminosilicate Refractory Ceramic Fibres*	-	0.010
VII	72	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)§	2580-56-5	0.100
VII	73	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-	548-62-9	0.100

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		ylidene]dimethylammonium chloride (C.I. Basic Violet 3) §		
VII	74	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.100
VII	75	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.100
VII	76	4,4'-bis(dimethylamino) benzophenone ¶ Áç@^q Áç@^D	90-94-8	0.100
VII	77	4,4'-bis(dimethylamino)-4"--(methylamino)trityl alcohol§	561-41-1	0.100
VII	78	Diboron trioxide*	1303-86-2	0.010
VII	79	Formamide	75-12-7	0.100
VII	80	Lead(II) bis(methanesulfonate)*	17570-76-2	0.010
VII	81	N,N,N',N'-tetramethyl-4,4'-methylenedianiline ¶ Áç@^q Áç@^D	101-61-1	0.100
VII	82	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine- 2,4,6(1H,3H,5H)-trione) È -Bis[4-(dimethylamino)phenyl]-4	2451-62-9	0.100
VII	83	(phenylamino)naphthalene-1-methanol (C.I.		

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Batch	No.	Substance Name	CAS No.	RL (%)
VIII	104	Diisopentylphthalate	605-50-5	0.100
VIII	105	Dimethyl sulphate	77-78-1	0.100
VIII	106	Dinoseb	88-85-7	0.100
VIII	107	Dioxobis(stearato)trilead*	12578-12-0	0.010
VIII	108	Fatty acids, C16-18, lead salts*	91031-62-8	0.010
VIII	109	Furan	110-00-9	0.100
VIII	110	Henicosfluoroundecanoic acid	2058-94-8	0.100
VIII	111	Heptacosafuorotetradecanoic acid	376-06-7	0.100
VIII	112	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	-	0.100
VIII	113	Lead bis(tetrafluoroborate)*	13814-96-5	0.010
VIII	114	Lead cyanamidate*	20837-86-9	0.010
VIII	115	Lead dinitrate*	10099-74-8	0.010
VIII	116	Lead monoxide*	1317-36-8	0.010
VIII	117	Lead oxide sulfate*	12036-76-9	0.010
VIII	118	Lead tetroxide (orange lead)*	1314-41-6	0.010
VIII	119	Lead titanium trioxide*	12060-00-3	0.010
VIII	120	Lead titanium zirconium oxide*	12626-81-2	0.010
VIII	121	Methoxyacetic acid	625-45-6	0.100
VIII	122	Methyloxirane (Propylene oxide)	75-56-9	0.100
VIII	123	N,N-Dimethylformamide	68-12-2	0.100
VIII	124	N-Methylacetamide	79-16-3	0.100
VIII	125	N-Pentyl-isopentylphthalate		

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Batch	No.	Substance Name	CAS No.	RL (%)
X	146	Dihexyl phthalate	84-75-3	0.100
X	147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.100
X	148	Disodium 4-amino-3-[[4'-(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.100
X	149	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	0.100
X	150	Lead di(acetate)*	301-04-2	0.010
X	151	Trixylyl phosphate	25155-23-1	0.100
XI	152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	0.100
XI	153	Cadmium chloride*	10108-64-2	0.010
XI	154	Sodium perborate; perboric acid, sodium salt*	-	0.010
XI	155	Sodium peroxometaborate*	7632-04-4	0.010
XII	156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.100
XII	157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.100
XII	158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	0.100
XII	159	Cadmium fluoride*	7790-79-6	0.010
XII	160	Cadmium sulphate*	10124-36-4 /31119-53-6	0.010
XII	161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate & 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE & MOTE)	-	0.100
XIII	162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed of dihexyl phthalate	-	0.100
XIII	163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	-	0.100
XIV	164	1,3-propanesultone	1120-71-4	0.100
XIV	165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.100
XIV	166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	0.100
XIV	167	Nitrobenzene	98-95-3	0.100

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Batch	No.	Substance Name	CAS No.	RL (%)
XXI	201	Tris(4-nonylphenyl, branched and linear) [ @ • ] @ Á V B Ú U D Á A C A E E Á D Á - nonylphenol, branched and linear (4-NP)	-	0.100
XXII	202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	0.100
XXII	203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	0.100
XXII	204	Diisooctyl phthalate	71850-09-4	0.100
XXII	205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	0.100
XXIII	206	1-vinylimidazole	1072-63-5	0.100
XXIII	207	2-methylimidazole	693-98-1	0.100
XXIII	208	Butyl 4-hydroxybenzoate	94-26-8	0.100
XXIII	209	Dibutylbis(pentane-2,4-dionato-O,O')tin**	22673-19-4	0.100
XXIV	210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	0.100
XXIV	211	Diocetyltin dilaurate, stannane, diocetyl-, bis(coco acyloxy) derivs., and any other stannane, diocetyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety**	-	0.100
XXV	212	1,4-Dioxane	123-91-1	0.100
XXV	213	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	-	0.100
XXV	214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	0.100
XXV	215	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7	0.100
XXV	216	Glutaral	111-30-8	0.100
XXV	217	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	-	0.100
XXV	218	Orthoboric acid, sodium salt*	13840-56-7	0.005
XXV	219	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	-	0.100
XXVI	220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	0.100
XXVI	221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1	0.100
XXVI	222	S-(tricyclo[5.2.1.0 <sup>2,6</sup> ]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-	255881-94-8	0.100

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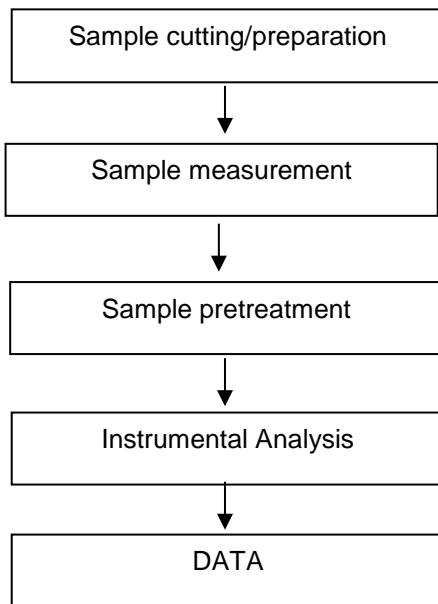
Batch	No.	Substance Name	CAS No.	RL (%)
		(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate		
XXVI	223	Tris(2-methoxyethoxy)vinylsilane	1067-53-4	0.100
XXVII	224	N-(hydroxymethyl)acrylamide	924-42-5	0.100
XXVIII	225	1,1'-[ethane-1,2-diylibosoxy]bis[2,4,6-tribromobenzene]	37853-59-1	0.100
XXVIII	226	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	79-94-7	0.100
XXVIII	227	4,4'-sulphonyldiphenol	80-09-1	0.100
XXVIII	228	Barium diboron tetraoxide*	13701-59-2	

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**ATTACHMENTS****Testing Flow Chart**

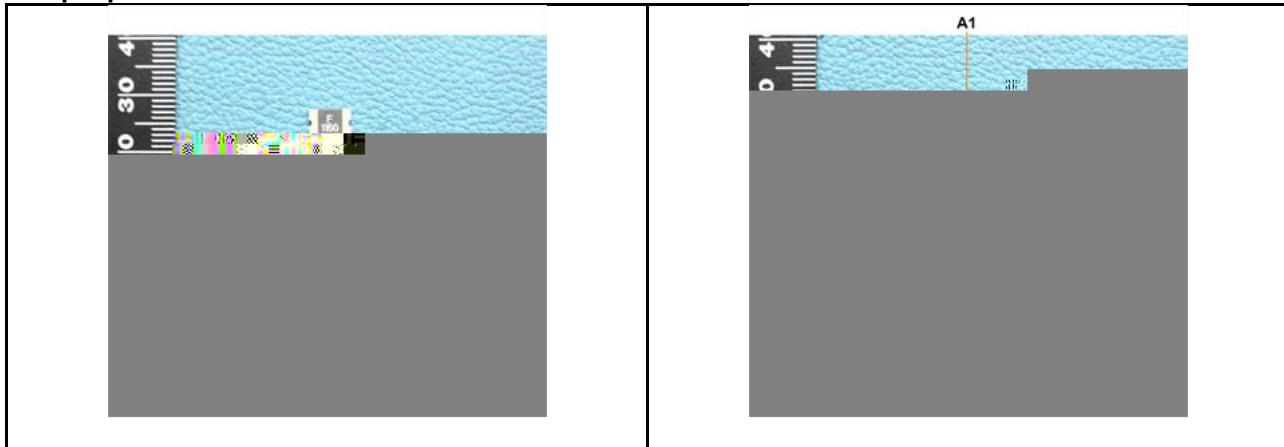
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### Sample photos:



SGS authenticate the photo on original report only  
\*\*\* End of Report \*\*\*